

ABSTRACT OF THE DISCLOSURE
**SYSTEMS AND METHODS FOR GEOPHYSICAL IMAGING USING
AMORPHOUS COMPUTATIONAL PROCESSING**

5 **[0095]** Various systems and methods of the present invention provide amorphous
computing systems and methods for use thereof. In some cases, the amorphous computing
systems include one or more amorphous hardware elements that are programmed under
control of a computer processor such as, for example, an AMD™ or INTEL™ based personal
computer. Portions of an algorithm can then be computed by the individual amorphous
10 hardware elements that can be, as one example, an FPGA or some subset of hardware gates
available on an FPGA. Methods can include a variety of computations including Wave
Equations and Kirchhoff algorithms. Thus, in particular cases, the amorphous computing
systems and methods for using such are applied to seismic imaging problems, as well as other
problems.

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